SPG 8715.2
October, 2000

John C. Stennis Space Center
Operational Readiness Program
Procedures and Guidelines

National Aeronautics and
Space Administration

John C. Stennis Space Center
Stennis Space Center, MS 39529-6000

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Responsible Office: QA00/Safety and Mission Assurance (S&MA)

SUBJECT: SSC Operational Readiness Program Procedures and Guidelines

PREFACE

P1. PURPOSE

This SPG establishes procedures and guidelines for conducting an Operational Readiness Assessment. Operational Readiness Assessments (ORA) shall be conducted by the following methods: Operational Readiness Inspection (ORI), Safety Review (SR), or Independent Investigation of facilities, operations, or equipment including Special Test Equipment (STE) in accordance with SPD 8715.1.

The primary function of an Operational Readiness Assessment is to assure that all hazards are identified and either eliminated, controlled or accepted to assure safe operations relative to personnel and property.

P2. APPLICABILITY

This SPG is applicable to all Operational Readiness activities associated with new construction or modification of existing facilities, operations and equipment in support of programs operating in facilities with either a Facility Risk Indicator (FRI) of level 1 or 2 at Stennis Space Center (SSC). SSC's FRI base line is on file in Central Engineering Files (CEF).

P3. AUTHORITY

a. NPG 8715.3, *NASA Safety Manual.*

b. SPD 8715.1, *Operational Readiness Program*.

P4. REFERENCES

All references are assumed to be the latest version unless otherwise specified.

a. NASA-STD-8719.7, *Facility System Safety Guidebook.*

b. 29 CFR, Part 1910.119, *Process Safety Management.*

c. 40 CFR, Chapter 1, *Environmental Protection Agency*, Subchapter C, *Program 2 Prevention Program*, Part 68, *Chemical Accident Prevention Provisions.*

P5. CANCELLATION

None

Original Signed By

Roy S. Estess
Director

DISTRIBUTION:
SDL-1
NODIS

CHAPTER 1. ORA REVIEW CRITERIA

1.1 Operational Readiness Inspection

ORI shall be reserved for new construction and/or reactivation of FRI level 1 facilities or significant increases in operational risk that has occurred (requires a complete FRI risk level change). Example: Facility upgrade of solid propellant test facility to process liquid propellants.

1.2 Safety Review

SR shall be reserved for new construction and/or reactivation of FRI level 2 facilities or modification of FRI level facilities resulting in FRI sub-level changes. Example: High pressure LOX & RP test adds ultra high pressure Hydrogen capability (FRI 1C changes to FRI 1A).

1.3 Independent Investigation

Independent Investigation shall be reserved for modifications to FRI level 1 and 2 facilities, not resulting in a FRI sub-level change. Facility changes are within established facility capability. Example: Minor Programmatic Special Test Equipment (STE) changes, not exceeding facility capabilities.

CHAPTER 2. ORA MEMBERSHIP

2.1 The Operational Readiness Assessment Board (ORAB) membership is depicted below:

Chairperson:		Deputy Center Director
Members:	**	Director, Center Operations and Support Directorate
		Director, Propulsion Test Directorate
		Director, Commercial Remote Sensing Program
		Director, Safety and Mission Assurance
		General Manager, Test and Technical Support Contractor
		General Manager, Facility Operations Support Services Contractor
	**	Alternate Chairperson

2.2 ORI and SR

The ORI and SR are performed by an Operational Readiness Inspection Committee (ORIC) and Safety Review Team (SRT), respectively.

2.2.1 The ORIC will consist of a chairperson, a recorder, and a minimum of five other members to assess all functional areas, and submit the findings and conclusions to the ORAB.

2.2.2 The SRT will differ from the ORIC in that it may involve fewer members and the SRT shall submit their findings and conclusions to the Director, S&MA and the appropriate operating Director.

2.2.3 A representative of the Safety and Mission Assurance Office will serve as a consultant to the ORIC and SRT to assure a complete and thorough review.

2.2.4 ORIC and SRT composition will normally include individuals from:

2.2.4.1 Appropriate Operating Directorate (e.g. PTD and CRSP);

2.2.4.2 Center Operations/Facilities Engineering Division;

2.2.4.3 Independent Safety Representative;

2.2.4.4 Appropriate laboratory, operating, or staff elements;

2.2.4.5 Independent Consultant (i.e. MSFC Propulsion Engineer, Hydrogen Peroxide Expert).

2.3 Independent Investigation

An Independent Investigation is performed by an Independent Investigator (II).

2.3.1 The II shall be one or more individuals who are assigned on an ad hoc basis by the Director of the Safety and Mission Assurance Office. Requests made by other offices to have an II shall be brought to the Director S&MA who shall sanction such reviews.

2.3.2 The specific areas of the II shall be defined by the Director, S&MA along with the appropriate operating Director. As with the SRT, findings and conclusions shall be presented to the Director, S&MA and the appropriate operating Director.

CHAPTER 3. ORA RESPONSIBILITY (SEE ATTACHMENT A)

3.1 The Operational Readiness Assessment Board is responsible for:

3.1.1 Performing status reviews and evaluations of the activities of ORICs as they are assigned and providing recommendations for additional activities as determined necessary;

3.1.2 Specifying the degree of approval authority granted to the ORIC for activation milestone events;

3.1.3 Conducting a final review to evaluate and assure adequacy of the total ORIC effort, including appropriate documentation; and

3.1.4 Reporting the readiness of the facility/operation to the Center Director, and providing the data required to support restrictions and limitations to be imposed; recommending, for concurrence, authority to proceed.

3.2 The Operational Readiness Assessment teams are responsible for:

3.2.1 Reviewing and inspecting the assigned equipment, facilities, or operations and associated operating procedures;

3.2.2 Assessing the risk and hazards associated with all aspects of the activity; inspecting and recommending changes or controls as necessary to certify operational readiness of the equipment, operation or facility;

3.2.3 Keeping the Director, S&MA Office, and management of the cognizant organizational element informed of progress;

3.2.4 Ensuring that all discrepancies are documented using a Review Item Discrepancy (RID) SSC Form 649;

3.2.5 Preparing and submitting a final report of findings and recommendations as required by this document;

3.2.6 Submitting all files and a final report to CEF for retention;

3.2.7 Assuring that a system exists to maintain a safe posture for both personnel and hardware;

3.2.8 Ensuring that all Review Item Discrepancies (RID's) are either closed out or elevated to the Operational Readiness Assessment Board (ORAB) for resolution.

CHAPTER 4. ORGANIZATION RESPONSIBILITY

4.1 The Director, S&MA Office is responsible for:

4.1.1 Determining the level of reviews to be conducted on facilities or equipment and/or operations or processes; assisting Directors in the identification of facilities or equipment that would require ORI/SRT/II review;

4.1.2 Selecting an ORIC/SRT/II Chairperson in concert with the appropriate Director and Chairperson of the Operational Readiness Assessment Board; establishing functional membership and consultancies in coordination with the ORIC/SRT/II Chairperson; preparing a NASA notice (see Attachment B) for the approving authorities signature, accompanied by rationale for and recommendation of any chairperson or members with a vested interest in the facility or operation under review;

4.1.3 Providing safety and quality assurance representatives for each ORIC and SRT;

4.1.4 Serving on the Operational Readiness Assessment Board;

4.1.5 Reviewing findings of all SRTs, IIs, and ORI sub system activations with the appropriate operating Director, authorizing continuance (see Attachment C) of operations or directing appropriate action to disposition outstanding issues;

4.1.6 Periodically reviewing the relevant operational readiness inspection policies, plans and procedures of other NASA and NASA Contractor facilities for compliance with this Policy Directive.

4.2 Directors/Managers of offices/programs/projects are responsible for:

4.2.1 Identifying existing or proposed equipment, facilities, or operations under their control or jurisdiction which, in their judgment, are sufficiently hazardous or programmatically important that an ORI, SRT or II is necessary;

4.2.2 Proposing an ORI, SRT or II for facilities, equipment, or operations identified to the S&MA Office so that the assessment can be completed prior to facility activation and if required, the assessment can be conducted without undue interference with scheduled use or operation;

4.2.3 Providing chairperson, members, recorders and consultants (recorders will be provided by organization responsible for the facility/equipment/operation or process under review); identifying to the Director, S&MA, any of the above individuals with a vested interest in the facility or operation under review and providing rationale for their selection;

4.2.4 Serving as point of contact for the ORIC, SRT, or II during the inspection, or designating an individual to act for him/her;

4.2.5 Implementing ORIC, SRT, or II recommendations and providing rationale to ORIC, SRT, or II for situations where ORIC recommendations cannot or should not be followed;

4.2.6 Assuring that requirements for analysis and supporting documentation and information are included in facilities or operations planning so that data can be made available to support ORI/SRT/II needs in a timely manner;

4.2.7 Providing to the chairperson of the ORIC, SRT, or II a periodic status of action being taken on review recommendations;

4.2.8 Assuring that appropriate analyses are accomplished when facility, procedures, and equipment modifications are made. Changes or modifications that may create new hazards are to be reported to the S&MA Office;

4.2.9 Providing to the ORIC, SRT, or II a review plan that identifies the requirements the facility or operation is intended to meet, documentation that will be provided to support satisfaction of the general requirements of this SPG, and a schedule for submittal of the documentation;

4.2.10 Providing for implementation of the intent of this SPG in all efforts;

4.2.11 Reviewing findings of all SRTs and IIs and, with the appropriate Operating Director, authorizing continuance of operations or directing appropriate action to disposition outstanding issues.

4.3 SSC organizational elements or employees are responsible for:

4.3.1 Providing all necessary information or assistance requested by the ORIC, SRT, or II;

4.3.2 Participating on ORICs, SRTs, or IIs as requested.

CHAPTER 5. ORA EVENT TIME-LINE

The following is a general time-line reference to the integration between a test project and the ORI/SRT/II review process (see Attachment D). The general amount of time required at each phase of the review process is also provided.

5.1 ORI/SRT/II Authorization Letter

When the test project has completed the design work and construction activities are nearing completion, a letter forming ORI, SRT, or II is written per SPD 8715.1. The Chairperson, any review members, and the scope of the review are identified.

5.2 Project Informational Review

It is the Chairperson's responsibility to request the needed project information and have this information provided to the review team members. Depending on the complexity of the project, this is started generally two weeks to one month prior to the facility walkdown and formal readiness review. The Chairperson coordinates with the appropriate Operating Directorate Point of Contact on the scheduling of the facility walkdown and formal review.

5.3 Facility Walkdown & Formal Readiness Review

A facility walkdown and formal readiness review is conducted after construction is completed, but prior to high risk facility activation tests. Facility checkouts with inert gases and liquids at low pressures are generally not considered high risk and completion of these activities provides needed operational readiness information to the review team. The facility walkdown is followed by a formal readiness review where the Project Office, Operations, Safety, and Test Article representatives present the configuration, current status, Hazard Analysis, planned activation, and Test Article testing. The walk-down and formal readiness review generally takes one to two days to complete.

5.4 ORI/SRT/II RIDS

Following the completion of the facility walkdown and formal readiness review, the ORI/SRT/II review team reconvenes to compile all Review Item Discrepancies (RIDs). The RIDs need to be concise on what the problems is, left uncorrected what is the risk, what is needed to correct the problem (tangible proof), and the deadline for correction (prior to what event). It is the Chairperson's responsibility to oversee the RID compilation so that duplications are eliminated and to present the complied RIDs to the appropriate Operating Directorate Point of Contact and Project Office Manager. RID compilation generally takes ½ day.

5.5 ORI/SRT/II Management Presentation & Authorization

The Chairperson coordinates with the S&MA Office and SSC Management to present the ORI/SRT/II findings. This is generally a formal presentation that describes what was reviewed, general observations, noted high risk areas, and the current status of the RID list. Generally not all RIDs are closed prior to the presentation to management. The Chairperson, drafts an authorization to proceed into test operations letter for management's signature contingent on the closures of all RIDs prior to the specified event. This letter is presented to Management for their consideration after the formal presentation. The presentation is normally an hour.

5.6 System Activation/Operational Releases

The RID(s) shall be written against a specific system and require closure prior to a specified event. This allows work to be completed on other systems in meeting schedules, while the RID(s) are being addressed. Prior to the presentation to management, the ORI/SRT/II Chairperson can release non safety critical systems for activation/operation as the RIDs against the system are closed. The Chairperson shall coordinate the presentation of findings with the S&MA/SSC Management as soon as possible after completing the review. This presentation shall occur before Test Article testing starts and before operation of any system(s) having a Risk Assessment Code (hazards analysis risk assessment) less than eight. After the presentation of findings with the S&MA/SSC Management and the authorization to proceed into testing has been granted, the Chairperson shall carry out any additional management directives provided.

The ORI/SRT/II Chairperson works closely with the appropriate Directorate Point of Contact and Project Office Manager in notifications of system releases in a timely manner. It is the Chairperson's responsibility to make sure all RID(s) are closed, prior to completing the ORI/SRT/II Final Report.

5.7 RID Closures

The Chairperson oversees the review of submittals for RID closures. The RID list status is formally tracked and updated. Updates are provided to the appropriate Directorate Point of Contact and Project Office Manager. The RIDs and the associated approved submittals for closures are formally filed. Depending on how many RIDs are written, it's not unusual to be reviewing RID submittals on and off over a several months.

Even after Management authorization is granted to proceed into testing, it is the Chairperson responsibility to oversee the review of submittals and timely RID closures for all remaining open items. Operations personnel are responsible to provide timely submittal of RID closure information and to make sure the RID is closed prior to proceeding into the specified operation.

5.8 ORI/SRT/II Final Report

After all RID's are closed, the Chairperson generates a final report in accordance with Section 7.2. The Chairperson also instructs that all ORI/SRT/II review information, presentations, authorization letters, RID's and associated closure information, and a copy of the final report filed in Central Engineering Files. Generally, it takes a couple of days to finalize a report. Routing the report for signature by the review members and gathering the information for the archives takes the ORI/SRT/II secretary, several weeks.

CHAPTER 6. REVIEW AREAS

The following is a list of recommended areas to review for the given systems being built or modified to accomplish the proposed project. The items presented are referred to on the attached matrix. This does not limit the Chairperson from considering other areas, but the items listed are the typical review areas. The Chairperson shall use these descriptions to fill in the attached matrix as a roadmap for the review for the proposed project.

6.1 Specified Review Areas

6.1.1 Project Requirements

A general review of the facility as described in the Facilities' Capabilities Document is recommended to provide an overall understanding of the facility. This can be used to determine which items on the attached matrix need to be reviewed for the given project. Also, a review of the Project Requirements Document (PRD) will provide an overview of the project and the planned interfaces between the test article and the facility.

6.1.2 Design

The following are potential review areas in the design process. If deemed necessary by the Chairperson, these items will be placed in the attached matrix and indicated for the applicable systems being reviewed.

6.1.2.1 Material Compatibility and Cleaning Requirements

This includes instrumentation, components, and piping systems.

6.1.2.2 Equipment Operating Ranges & Margins

This includes stress analysis, control functions, RTD and Thermocouple ranges, Pressure sensors, relief devices, and pressure vessels.

6.1.2.3 Data Acquisition and Controls Configuration

This area reviews single point failures and system safety interlocks.

6.1.2.4 Deviation/Waivers

Review existing approved deviation/wavier against the systems being reviewed or modified. The chairperson shall request deviation/wavier from the Configuration Management Office.

6.1.3 Construction

The following are potential review areas for construction. If deemed necessary by the Chairperson, these items will be placed in Attachment E for the applicable systems being reviewed.

6.1.3.1 Working Hazards to Personnel

This area addresses confined areas, tripping hazards, egress points, etc.

6.1.3.2 Construction Processes

This area addresses proper procedures for welding, cleaning and maintaining clean, and power installations.

6.1.4 Activation/Operations

The following are potential review areas for activation/operations. If deemed necessary by the Chairperson, these items will be placed in Attachment E for the applicable systems being reviewed.

6.1.4.1 Personnel Qualifications

Verification that the team proposed to do the work has been trained and/or has the experience to complete the project.

6.1.4.2 Safety Critical Procedures

Review of the procedures used to run the operations. This can be a sampling to verify the process for the correct integration between all disciplines and the customer are completed.

6.1.4.3 Critical System Operations

Review of the planned abort process, deluge, purges, and controls systems in the event of a failure.

6.1.4.4 Configuration Control

Process verification for configuration control of hardware and software.

6.1.4.5 Redline System

Review of the redline integration with controls and operations to verify system reliability.

6.1.4.6 Support Systems

For each system identified for review, the interaction of the support system must be included. Examples of support systems are PLC's, DAS, communications, and visual and audio warning systems.

6.1.5 Safety Systems

The following are potential review areas for safety systems. If deemed necessary by the Chairperson, these items will be placed in Attachment E for the applicable systems being reviewed.

6.1.5.1 Hazard Analysis

Review of the hazard analysis process and subsequent closure of the items to verify this process is proceeding. This is a verification that the process is occurring, not a separate requirement.

6.1.5.2 Hazardous Operations Procedures

Verification that systems requiring hazardous operations (TEA/TEB, Squib Arm/Disarm, etc) are identified to be written.

6.2 Specified System Review

The following is a list of typical systems being built or modified to accomplish the proposed project. This does not limit the Chairperson from considering other systems, but the items listed are the typical review areas. The Chairperson shall use these descriptions to fill in Attachment E as a roadmap for the review for the proposed project.

6.2.1 Propellants

6.2.1.1 Liquid Oxygen
6.2.1.2 Liquid Hydrogen
6.2.1.3 RP-1
6.2.1.4 Hydrogen Peroxide
6.2.1.5 JP-8

6.2.2 Pneumatics

6.2.2.1 Air
6.2.2.2 Gaseous Nitrogen
6.2.2.3 Gaseous Hydrogen
6.2.2.4 Helium
6.2.2.5 Gaseous Oxygen

6.2.3 Miscellaneous Systems

6.2.3.1 Hydraulics
6.2.3.2 Firex/Deluge
6.2.3.3 Electrical Systems
6.2.3.4 Lasers

6.3 Use of Attachment E

The Chairperson will establish with the operational team (i.e. PTD for test programs) and S&MA the areas to be reviewed using the matrix as a roadmap. For example, if an existing LOX system is being used in a manner it was designed for, yet out of the operational experience base, the Chairperson will want to address areas in the Activation/Operation area and not in the Construction area in the LOX column of the matrix.

CHAPTER 7. REPORTING REQUIREMENTS

7.1 Discrepancies and Recommendations

All discrepancies and recommendations shall be noted on SSC Form 649. A control number shall be assigned to each discrepancy/recommendation for future disposition. Recommendations will be deliberated in a meeting with all members of the ORIC/SRT/II before forwarding to the ORAB, the Director of S&MA, and either the Director of Propulsion Test or the Director of Center Operations and Support.

The ORIC/SRT/II will review proposed recommendations with appropriate operational personnel to assure that the recommendations are understood and that the ORIC/SRT/II has not acted on the basis of inaccurate or incomplete information. The ORIC/SRT/II will establish time or event deadlines associated with each recommendation or discrepancy.

7.2 Final Written Report

7.2.1 The ORIC/SRT/II will maintain records of all proceedings and prepare a report. ORI/SRT/II Chairperson shall send original material to Central Engineering Files for archiving.

7.2.2 The Report will be prepared in two parts as follows:

7.2.2.1 Part I will be an Executive Summary. It will include a copy of the Management Announcement establishing the ORIC/SRT/II, a brief summary of the activities (number of meetings, presentations to the Operational Readiness Assessment Board), identification of the number of action items and status, residual risks, conclusions, recommendations, and signature page for the signatures of the ORIC/SRT/II members. Distribution will include Center Deputy Director, Board and ORIC/SRT/II members, and affected program managers and laboratory managers.

7.2.2.2 Part II will be supporting data and information. It will include minutes of meetings, presentation charts, directly related correspondence, and other information judged to be appropriate to support any future investigation or review.

7.2.3 ORA Team Member Release (see Attachment F).

ATTACHMENT A: ORA RESPONSIBILITY MATRIX

ORGANIZATION	IDENTIFY REVIEW FACILITIES/SYSTEMS	DETERMINE ORA REVIEW LEVEL	NOMINATE ORA CHAIR	SELECT ORA CHAIR	NOMINATE ORA PERSONNEL	PROVIDE CONSULTANTS & RECORDER	SELECT ORA TEAM	PREPARE ORA TEAM DESIGNATION LETTER	AUTHORIZE ORA TEAM MEMBERSHIP	DEVELOP ORA MILESTONES	ASSURE COMPLETION OF APPLICABLE ANAYSES	MAINTAIN FRI INDEX	IMPLEMENT ORA RECOMMENDATION	PROVIDE ORA NON-CLOSURE RATIONALE	REVIEW SRT & II FINDINGS	AUTHORIZE SRT/II "OK TO PROCEED"	REVIEW ORIC FINDINGS	AUTHORIZE ORIC "OK TO PROCEED"	RECOMMEND SSC READY TO TEST	AUTHORIZE SSC READY TO TEST	RELEASE ORA TEAM	ASSESS ORA POLICIES, PLANS & PROCEDURES
S&MA		X		X	X		X	X		X	X				X	X						X
OPERATING DIRECTORATE	X	X	X	X	X	X	X			X	X		X	X	X	X						
CTR. OPS.			X		X						X	X										
ORA CHAIR							X			X												
ORAB									*	X							X	X	X		*	
CENTER DIRECTOR																				X		

* ORAB CHAIR ACTION

ATTACHMENT B: TEAM DEVELOPMENT LETTER (SAMPLE)

AA00 June 23, 1999

TO: QA00/J. Gasery, Jr.
RA00/D. McLaughlin
VA00/L. Mix
R/RD/D. Geiger

FROM: AA00/Mark K. Craig

SUBJECT: Operational Readiness Inspection of CBC Test Program

Per agreement with Center Operations, PTD, S&MA, Boeing/Rocketdyne, and in accordance with SPD 1700.4B, the duties of the review team for the B1 RS 68 Engine Test Program are to expanded include the CBC Test Program.

Test Engineering	Gerald Meeks (Co-Chairman)
Center Operations	Kirk Miller (Co-Chairman)
Safety & Mission Assurance	Ted Mason
Propulsion Test	Pat Mooney
Rocketdyne	Rob Moeller (replaces Jim Wahl)
Rocketdyne	Terry Rainey
Propulsion Test	Connie Shuler (Recorder)

Incremental findings for the system activation will be presented to Boyce Mix (PTD) and John Gasery (S&MA) prior to each phase of activation.

The review team will present its findings to the Operational Readiness Assessment Board.

Mark K. Craig
Deputy Director

cc:
QA00/T. Mason
RA30/K. Miller
VA07/P. Mooney
VA20/C. Shuler
VA30/G. Meeks
R/RD/R. Moeller
R/RD/T. Rainey

ATTACHMENT C: ACTIVATION APPROVAL LETTER (SAMPLE)

AA00 April 26, 1999

TO: AA00/Director

FROM: AA00/Chairman, Operational Readiness Assessment Board (ORAB)

SUBJECT: 250K Hybrid at E-1 Test Stand

The Operational Readiness Assessment Board (ORAB) has reviewed the findings of the Operational Readiness Inspection Committee (ORIC). Currently there are 18 open Review Item Discrepancies (RIDS) affecting 250K Hybrid Testing. The RIDS are as follows E1-ORI-CI: 001, 002, 003, 004, 005, 006, 007, 008, 011, 012, 013, 014, 015, 017, 019, 020, 021, and 022. On closure of all open RIDS to the satisfaction of the ORIC, the ORAB recommends that the E-1 Test Stand be authorized to begin operations for 250K Hybrid testing.

Mark K. Craig
Deputy Director

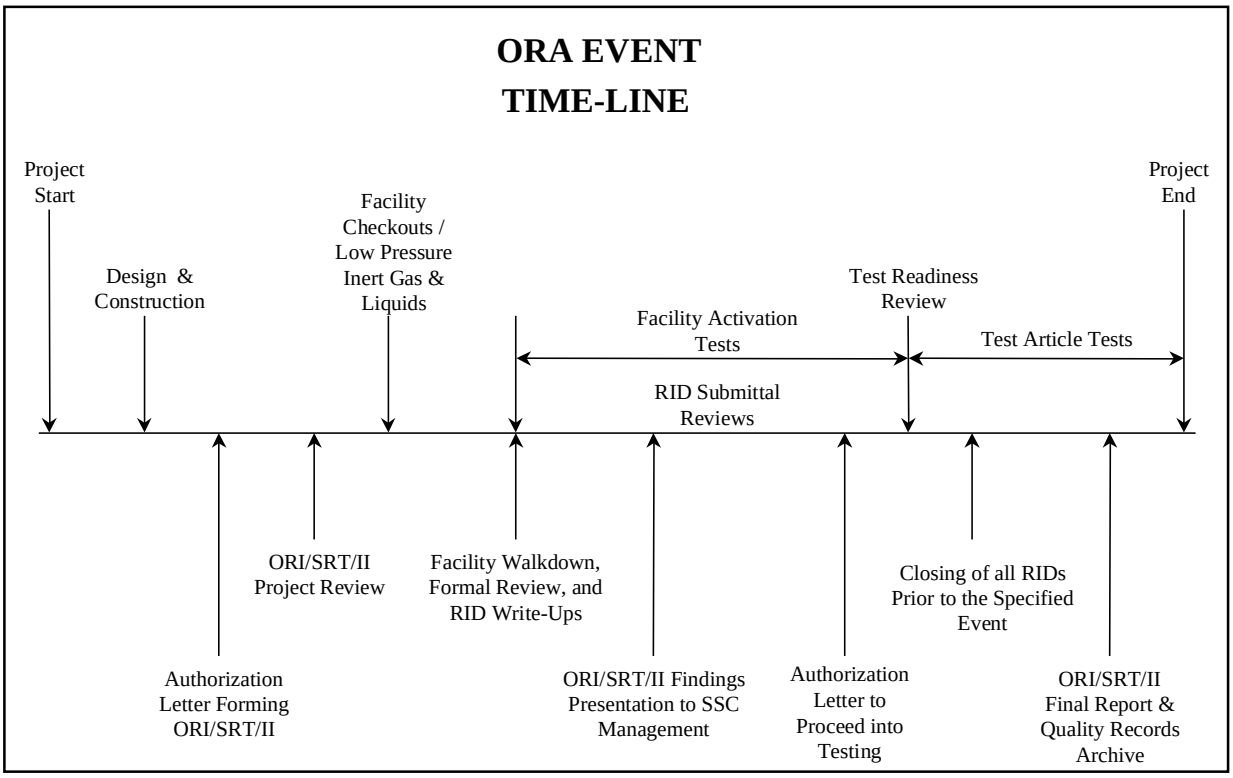
cc:
VA06/R. Bruce
VA08/S. Nunez
VA33/F. Douglas
KSC/D. Spacek

Concurrence:

Roy S. Estess
Director

Date

ATTACHMENT D: ORA EVENT TIME-LINE DIAGRAM



ATTACHMENT E: MATRIX

ORI/SRT/II Review Matrix

Systems / Review Areas		Propellants							Pneumatics							Miscellaneous				
		Liquid Oxygen	Liquid Hydrogen	RP-1	Hydrogen Peroxide	JP-8	Other	Air	GN	GH2	GHe	GOX	UHP GN	UHP GH	Hydraulics	Firex/Deluge	Power Systems	Lasers	Other
	Program Reqts																		
STE																			
Construction																			
Operations																			
Safety Sys																			

ATTACHMENT F: TEAM RELEASE LETTER (SAMPLE)

VA32E/RH00011 November 23, 1999

TO: Distribution

FROM: B2 LCT SRT/ORI Committee Review Members

SUBJECT: B2 LCT PTA SRT/ORIC & HTF Cold Box SRT
Executive Summary Report

Per SPD 1700.4B requirements, the B2 LCT Safety Review Team (SRT) /Operational Readiness Inspection Committee (ORIC) provides this Executive Summary report for B2 LCT PTA SRT/ORIC & HTF Cold Box SRT. The committee also transfers the official files to the S&MA office for archive. See attached summary of B2 LCT SRT/ORIC activities during this period.

The B2 LCT Safety Review Team (SRT)/ORIC was initially established and scope provided by attached letter. Under the previous B2 LCT HTF SRT/ORIC activities, the LOX, RP1, and facility transfer systems were activated and made operational. See B2 LCT HTF SRT/ORIC Executive Summary Report dated 3/1/99.

A safety review was completed on the PTA propellant systems (including the run tanks) and the finding presented to management (S&MA and PTD Directors). Management granted approval to proceed into activation\operation of the PTA propellant systems contingent upon closure of all open RIDs. See attached authorization letter and RID closures.

An ORI was conducted for the B2 LCT PTA, on June, 23,1999. Upon completion of the ORI, the ORIC presented it's finding and recommendations to the ORAB. The ORAB granted approval to proceed into test operations, contingent upon closure of all open RID's, prior to the specified event. See attached authorization letter and RID closures.

The scope of the LCT SRT/ORI was increased, per attached letter, to include the Horizontal Test Facility (HTF) POGO and Cold Box optional test systems. The requirement for POGO testing was cancelled by Danny Davis (MSFC Programs Office). A safety review was completed on the HTF Cold Box and the finding presented to management (S&MA and PTD Directors). The management granted approval to proceed into activation \ operation of the HTF Cold Box contingent upon closure of all open RID's. See attached authorization letters and RID closures.

The following were the PTA SRT / ORI committee members during this B2 LCT SRT/ORIC review process:

Randy Holland (Chairman)
Wendy Holladay
Flex Rivero
Tim Gautney (MSFC Test Operations)
Ted Mason (Safety)
Stan Warren
Terry Addlesperger
Bryan Haas (Requested by Chairman)

For the HTF Cold Box SRT, a subset of the ORI committee was used. The following were the membership:

Randy Holland (Chairman, Electronic Systems)
Ted Mason & Buddy Newbold (Safety)
Bryan Haas (Mechanical Systems)

This concludes the B2 LCT SRT/ORIC review efforts in the activation of the B2 test facility systems, HTF and PTA test positions, and the HTF cold box option.

Concurrence:

_____	_____	_____
Randolph Holland LCT ORI Chairman	Terry Addlesperger Mechanical / Operations	Wendy Holladay Electrical Systems
_____	_____	_____
Flex Rivero Technical Systems	Stan Warren Mechanical / Operations	Ted Mason S&MA Directorate
_____	_____	
Tim Gautney MSFC Test Operations	Bryan Haas Mechanical Systems	

Distribution:

AA00/M. Craig
QA00/John L. Gasery Jr., C. Arnold, T. Mason, B. Newbold
RA00/Florence Kailiwai-Barnett, D. McLaughlin
RA30/F. Rivero
VA00/L. Boyce Mix, L. Ellis
VA07/P. Mooney
VA09/R. King
VA20/J. Stealey
VA22/T. Addlesperger, S. Warren
VA30/R. Gilbrech
VA32/R. Shamin, B. Haas, W. Holladay
VA33/D. Chenevert
EP92/T. Gautney
LMSO/D. Jarrell